

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
Field Office

SILTY SHALLOW, 5-8" p.z.
RANGE SITE DESCRIPTION

Major Land Resource Unit: D-37A
Site No.: 037AY037NM

Date: AUG 24 1993

Approved By: *R.L. Carmichael*

A. PHYSICAL CHARACTERISTICS

1. Physiographic Features

This site occurs on knolls and footslopes below cuestas and low mesas of undulating plateaus. It does not benefit from run-in moisture from adjacent areas and may suffer some from runoff at the steeper slopes. It occurs on all exposures. Slopes range from 1 to 10 percent. Elevations range from 5,300 to 6,300 feet.

2. Soils

a. The soils are shallow and well drained. They are formed in alluvium and residuum derived dominantly siltstone. Surface textures include very fine sandy loam. The subsoil has textures of loam. Siltstone is at a depth of 18 inches. Permeability is moderate. Available water capacity is very low. Runoff is medium and the hazard of water erosion is moderate. The hazard of soil blowing is severe. The soils are mildly to moderately alkaline (pH 7.4-8.4). They are moderately saline (EC 8-16) and slightly sodic (SAR 5 to 13).

b. Major soils associated with this site are:

Soil Taxonomic Unit

Shiprock SSA:

215 - Persayo-Fordbutte Assoc. (Persayo part).

Additional information may be found in Section II of the Field Office Technical Guide.

3. Climatic Features

- a. Mean annual-precipitation varies from 5 to 8 inches. About 60 percent of this moisture comes as rain during the months of April through October. May and June are the driest months. Most of the moisture from November through March comes as snow. Winds of high velocity during late winter and early spring are common.
- b. Mean temperatures for the hottest month, July, are about 83° F. The coldest month is January, when the mean temperature is about 27° F. Extreme temperatures of 104° F. for a high and -17° F. for a low have been recorded. Frost free period ranges from 140 to 160 days.
- c. The cool-season plants start growth in March and end with plant maturity and seed dissemination about mid-June. During June, July, August and September, the warm-season plants make optimum growth taking advantage of the warm temperature and moisture from tropical air out of the Gulf of Mexico. About 40 percent of the total precipitation is received during these summer months. The other 60 percent received during the fall-winter-spring months influence cool-season plants.

4. Native (potential or climax) Vegetation

- a. This range site has a plant community made up primarily of grasses and low growing shrubs. In the original plant community there is a mixture of both cool and warm season plants. The salinity and sodium content of the soil determines the species that will grow on this site.
- b. Plant species most likely to invade or increase on this site when it deteriorates are Russian thistle, other annual weeds, galleta, alkali sacaton and sickle saltbush. When this site is continuously grazed, cool season grasses are replaced by warm season salt tolerant species. Sickle saltbush is adapted to this site because of the chemical properties of the soil and will be the last species of the original community as the site completely deteriorates.
- c. The following is a list of plants that are found in the potential plant community. Range condition of areas within this site is determined by comparing the present plant community with that of this potential plant community. Count as potential no more than the maximum percent shown on the guide for any species. Four condition classes are used to express this degree of comparison of the present plant community to that of the potential:

Excellent	76-100
Good	51-75
Fair	26-50
Poor	0-25

Relative percentage of total plant community by weight:

<u>Grasses and Grasslike (50-60%)</u>	<u>Percent</u>
alkali sacaton (SPAI)	25-30
Indian ricegrass (ORHY)	5-10
galleta (HIJA)	5-10
gyp dropseed (SPNE)	0-5
bottlebrush squirreltail (SIHY)	0-5
other perennial grasses (PPGG)	0-3

<u>Forbs (1-5%)</u>	<u>Percent</u>
yellow beebush (CLLU2)	0-1
globemallow (SPHAL)	0-1
perennial forbs (PPFF)	0-2
annual forbs (AAFF)	0-1

<u>Shrubs and Trees (25-35%)</u>	<u>Percent</u>
sickle saltbush (ATFA)	20-25
shadscale (ATCO)	0-5
mat saltbush (ATCO4)	0-1
hairy coldenia (COHI)	0-2
winterfat (EULA5)	0-1
bud sagebrush (ARSP5)	0-3
other shrubs (SSSS)	0-2

This list of plants and their relative proportions are based on near normal years. Fluctuations in species composition and relative production may change from year to year dependent upon abnormal precipitation or other climatic factors.

The potential (climax) plant community has been determined by study of range relict areas, or areas protected from excessive grazing. Trends in plant communities going from heavily grazed areas to lightly grazed areas, seasonal use pastures and historical accounts have also been used.

5. Total Annual Production

In excellent condition this site will produce approximately the following amounts of air dry herbage per acre in:

favorable year	<u>300 lbs.</u>
normal year	<u>200 lbs.</u>
unfavorable year	<u>100 lbs.</u>

B. MAJOR USES

1. Livestock

a. Site factors influencing management

This site is suitable for grazing by all classes of livestock most seasons of the year. The winter season would be the best because of the plant species involved. Planned grazing systems can be readily adapted to this site. This site will seldom be used as a key management area for livestock.

b. Guide to Initial Stocking Rate

The following stocking rates may be used as a guide to establish a safe starting stocking, but should be evaluated and livestock numbers adjusted based on actual use experience and climatic fluctuations.

<u>Condition</u> <u>Class</u>	<u>Percent</u> <u>Climax Vegetation</u>	<u>AC/AUM</u>	<u>AUM/AC</u>
Excellent	76-100	8-25	.04-.12
Good	51- 75	10-28	.03-.10
Fair	26- 50	13-40	.02-.07
Poor	0- 25	22-80	.01-.04

2. Wildlife

a. Site factors influencing wildlife.

Suitable for grazing by big game species, especially during winter.

b. Guide to site plant use by wildlife species.

Plant Species	Selected Wildlife Species			
	Cottontail Rabbit	Mule Deer	Pronghorn	Mourning Dove
alkali sacaton	X			
Indian ricegrass	X	G-Foliage	G-Foliage	G-Seed
gyp dropseed	G-Foliage	F-Foliage		
perennial forbs	G-Foliage	G-Foliage	G-Foliage	G-Seed
sickle saltbush	F-Foliage			
winterfat	G-Foliage	G-Foliage	G-Foliage	
shadscale			G-Foliage	
yellow beplant				G-Seed
globemallow			G-Foliage	

G = Good F = Fair P = Poor X = Used, Extent Unknown

3. Recreation and Natural Beauty

a. Land Form -

Knolls and footslopes below cuestas and low mesas of undulating plateaus.

b. Landscape Quality -

The somewhat bareness and sparse plant cover of the site provides an interesting scene from that of the adjacent sites.

c. Climate -

Winters are cold. Springtime is usually windy. The summers are mild with typical Southwest thunderstorms.

d. Activities -

Wildlife observations, photography and hiking are occasional recreational activities.

4. Other Uses -

C. THREATENED OR ENDANGERED PLANTS AND ANIMALS

1. Plants -

None known.

2. Animals -

None known.

D. LOCATION OF TYPICAL EXAMPLE OF THE SITE

1. State location - Table Mesa Quad - 2.5 miles SW of Table Mesa - Sec. 27, T27N, R18W - Navajo Res., NM.

2. Field office site location -

E. FIELD OFFICES

Shiprock, NM.